We are Missing the Neurocognitive Consequences of Chemotherapy-Induced Hearing Loss in Pediatric Brain Tumor Survivors

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Abstract

This systematic review examined the effects of chemotherapy-induced hearing loss on cognitive function in pediatric brain tumor survivors. Four databases were searched according to Cochrane recommendations, using relevant search terms. Thirty-seven unique results were identified and abstract screening reliability was performed. Only peer-reviewed articles that provided quantitative measurements of neuropsychological function were included. Data extraction and quality assessment reliability was performed on three eligible articles. Extracted data included participant information and neuropsychological outcomes. This study revealed that pediatric brain tumor survivors experience chemotherapy-induced hearing loss that has an effect on verbal comprehension, working memory, and processing speed. Neurocognitive function of these children should be assessed at baseline and monitored so that appropriate short and long-term rehabilitative support may be provided.